

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:)	
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KABEL, DARRIN W.)	Attorney Docket No.:
)	702.254
Serial No.: 10/667,026)	
)	
Filed: September 18, 2003)	Group Art Unit No. 2636
)	
METHODS, SYSTEMS AND DEVICES)	
FOR CARTOGRAPHIC ALERTS)	Examiner: MEHMOOD, J.

APPEAL BRIEF

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APPELLANT'S AMENDED BRIEF ON APPEAL

In response to the Notification of Non-Compliant Appeal Brief dated January 17, 2007, Appellant's amended brief on Appeal in accordance with 37 C.F.R. § 41.37 is hereby submitted. The Examiner's rejections of claims 1, 5-10, 19-23, 27-34, and 38-67 are herein appealed, and allowance of said claims is respectfully requested.

The filing fee for the Appeal Brief was paid on December 13, 2006. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 501-791.

Respectfully submitted,

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Following are the requisite statements under 37 C.F.R. § 41.37:

I. Real Party in Interest

Darrin W. Kabel and Steven J. Meyers are the inventors of the claimed invention. The inventors assigned the above-referenced application to Garmin Ltd., the Real Party in Interest.

II. Related Appeals and Interferences

There are no related appeals or interferences, known to the Appellants, which may directly affect or be directly affected by the Board's decision in the pending appeal.

III. Status of Claims

Claims 1, 5-10, 19-23, 27-34, and 38-67 stand rejected and appealed. Claims 2-4, 11-18, 24-26, and 35-37 have been canceled.

IV. Status of Amendments

All amendments submitted by the Appellant have been entered.

V. Summary of Claimed Subject Matter

The claimed embodiments of the present invention are directed at an aid to marine navigation. More specifically, the present invention displays, highlights, and/or calculates a

route in order to avoid obstacles, such as underwater sand bars, reef structure, and the like.

Claim 1 recites "A method for marine navigation, comprising: receiving one or more preselected conditions from a user", as described on page 6, lines 6-20; "identifying a potential waypoint", as described on page 16, lines 29-31, and shown as step 600 in Figure 6; and "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as described on page 8, lines 4-10, and shown as steps 610 and 620 in Figure 6, which is discussed on page 16, line 27, thru page 17, line 13.

Claim 19 recites "[a] method for marine navigation, comprising: receiving one or more preselected conditions from a user", as described on page 6, lines 6-20; "receiving a user defined graphical filter area from the user", as described on page 14, line 24, thru page 15, line 2, and shown as item 478 in Figure 4E; "identifying the user defined graphical filter area on a display", as shown in Figure 4E; "analyzing cartographic data only within the user defined graphical filter area for the preselected conditions", as shown in Figure 4E (It can be seen that the land is depicted as a dangerous preselected condition, only within the graphical filter area. The land outside the graphical filter area remains unaltered); and "providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions", as described on page 15, lines 3-10.

Claim 23 recites “[a] computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for: receiving one or more preselected conditions from a user”, as described on page 6, lines 6-20; “identifying a potential waypoint upon a first event”, as described on page 16, lines 29-31, and shown as step 600 in Figure 6; and “performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints”, as described on page 8, lines 4-10, and shown as steps 610 and 620 in Figure 6, which is discussed on page 16, line 27, thru page 17, line 13.

Claim 34 recites “[a]n electronic marine navigation device, comprising: a processor”, as described on page 5, line 27, thru page 6, line 5, and shown as item 310 in Figure 3; “a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user”, as described on page 6, lines 6-20; “a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location”, as described on page 6, lines 21-31, and shown as item 320 in Figure 3; and “a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the

potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as described on page 6, lines 6-31; described on page 8, lines 4-10; and shown as steps 610 and 620 in Figure 6, which is discussed on page 16, line 27, thru page 17, line 13.

Claim 44 recites "[a] method for marine navigation, comprising: identifying a potential waypoint", as described on page 16, lines 29-31, and shown as step 600 in Figure 6; and "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as described on page 8, lines 4-10, and shown as steps 610 and 620 in Figure 6, which is discussed on page 16, line 27, thru page 17, line 13.

Claim 45 recites "[a] method for marine navigation, comprising: receiving indication of a minimum water depth from a user", as described on page 6, lines 6-20; "identifying a potential waypoint", as described on page 16, lines 29-31, and shown as step 600 in Figure 6; and "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints", as described on page 8, lines 4-10, and shown as steps 610 and 620 in Figure 6, which is discussed on page 16, line 27, thru page 17, line 13.

Claim 47 recites "[a] method for marine navigation, comprising: receiving indication

of a minimum water depth from a user", as described on page 6, lines 6-20; "displaying marine cartographic data", as described on page 12, lines 7-17, and shown as item 400 in Figure 4A; "receiving indication of a potential waypoint", as described on page 16, lines 29-31, and shown as step 600 in Figure 6; "displaying a substantially straight line between a first location and the potential waypoint", as described on page 16, lines 18-20, and shown as the line between items 410 and 414 in Figure 4A; "wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth", as described on page 16, lines 21-24, and shown as item 418 in Figure 4A; and "performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth", as described on page 8, lines 4-10, and shown as steps 610 and 620 in Figure 6, which is discussed on page 16, line 27, thru page 17, line 13.

Claim 48 recites "[a] method for marine navigation, comprising: displaying marine cartographic data", as described on page 12, lines 7-17, and shown as item 400 in Figure 4A; "receiving indication of a potential waypoint", as described on page 16, lines 29-31, and shown as step 600 in Figure 6; "displaying a substantially straight line between a first location and the potential waypoint", as described on page 16, lines 18-20, and shown as the line between items 410 and 414 in Figure 4A; "wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the

water depth is expected to be less than the minimum water depth", as described on page 16, lines 21-24, and shown as item 418 in Figure 4A; and "performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth", as described on page 8, lines 4-10, and shown as steps 610 and 620 in Figure 6, which is discussed on page 16, line 27, thru page 17, line 13.

Claim 54 recites "[a] method for marine navigation, comprising: displaying marine cartographic data", as described on page 12, lines 7-17, and shown as item 400 in Figure 4A; "receiving indication of a potential waypoint", as described on page 16, lines 29-31, and shown as step 600 in Figure 6; and "displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint", as described on page 16, lines 18-20, and shown as the line between items 410 and 414 in Figure 4A; and "wherein the line highlights where the water depth is expected to be less than a minimum water depth", as described on page 16, lines 21-24, and shown as item 418 in Figure 4A.

Thus, various claimed embodiments of the present invention provides an aid to marine navigation by displaying, highlighting, and or routing around obstacles, such as underwater sand bars, reef structure, and the like.

Appellants also note that the page and line numbers cited above are for reference purposes only and should not be taken as a limitation on the support for, or scope of, the claimed subject matter. Support for the claimed subject matter may be found throughout the specification and drawings and the page and line numbers cited above merely refer to

exemplary portions of the specification.

VI. Grounds of Rejection to be Reviewed on Appeal

- a. Claims 19, 20, and 22 stand rejected under 35 U.S.C. 102(b) as being anticipated Bailey et al., U.S. Patent No. 4,873,676.
- b. Claims 1, 5-10, 23, 27-32, 34, 38-40, 42-44, 58-61, 66, and 67 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0006423 (Fujimoto '423) in view of Michaelson et al., U.S. Patent No. 6,734,808.
- c. Claims 45, 46, and 62 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Michaelson in view of Walsh et al., U.S. Patent No. 3,886,487.
- d. Claims 47-57 and 63-65 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0003958 (Fujimoto '958), in view of Fujimoto '423 and Michaelson.
- e. Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey in view of Fujimoto '423.
- f. Claim 33 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Michaelson, in view of Tobin Jr., U.S. Patent No. 4,323,992.

- g. Claim 41 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Michaelson in view of Bailey.

Applicant appeals from these grounds of rejection.

VII. Argument

Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). More specifically, "Federal Circuit decisions repeatedly emphasize that anticipation (lack of novelty) is established only if (1) all the elements of an invention, as stated in a patent claim, (2) are identically set forth, (3) in a single prior art reference". Chisum on Patents § 3.02. *See also* *Gechter v. Davidson*, 43 USPQ2d 1030, 1032 (Fed. Cir. 1997) ("Under 35 U.S.C. § 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim.").

- a. **Rejection of claims 19, 20, and 22 under 35 U.S.C. 102(b) as being anticipated Bailey et al., U.S. Patent No. 4,873,676.**

I. Summary of Arguments

Rather than analyzing cartographic data only within a user defined area, Bailey

teaches analyzing sonar returns and automatically rescaling a user defined display area. Thus, Bailey cannot be said to teach, or even suggest, “analyzing cartographic data only within the user defined graphical filter area for the preselected conditions”, as claimed.

II. Summary of the Reference

Bailey teaches a sonar apparatus. Bailey’s improvement over the prior art is his ability to detect the bottom and “change display scales in response to the detected bottom going off-scale”. Abstract. In other words, Bailey teaches rescaling a sonar display. It is important to note that Bailey does not teach cartographic data. Bailey’s only use of the term “map” is in association with a memory map, with is simply non-analogous to cartographic data.

III. The Examiner failed to establish a *prima facie* case of anticipation as the cited reference does not teach each claim limitation.

Claim 19 recites “analyzing **cartographic** data **only** within the user defined graphical filter area for the preselected conditions”. The Examiner mistakenly asserts that this limitation is disclosed by Bailey in column 3, lines 26-36 and 46-48. Page 3 of the August 8, 2006 Final Office Action. However, column 3, lines 26-29 state “[a]utomatic display scale changing is provided in response to the detected bottom going off-scale, or in response to the detected bottom rising to within a predetermined depth”. Therefore, Bailey actually teaches a system for automatically **rescaling** a display area based on changing

water depth. In other words, rather than analyzing data only within a user defined area, Bailey teaches automatically redefining the user defined display area. In fact, the Examiner acknowledges “Bailey discloses an automatic display scale changing”. Page 14 of the August 8, 2006 Final Office Action. Thus, Bailey overrides any user definition of an area.

Furthermore, Bailey analyzes the entirety of his automatically redefined display area for target data or sonar returns. In fact, Bailey must analyze the entirety of the sonar returns for at least two reasons. First, the very nature of sonar is that one sends out a pulse and times the echo, thereby determining a distance to a target. Bailey's sonar signals, by their very nature, must pass completely through a predefined space under a boat. This space is predefined by the transducer itself. In other words, the user simply cannot define where the sonar signals go, and therefore cannot define any area, and Bailey's cannot analyze only a portion of the returns. Thus, one cannot analyze only a user defined area, one must analyze everything that is received. Second, Bailey must analyze all received signals in order to detect the bottom, which is of course, the entire point of Bailey's invention. Thus, Bailey analyzes the entirety of the area. Bailey may only display some portion of that area, but, as discussed above, Bailey redefines the display area, based on the analyzed sonar returns from the entire area.

Finally, Bailey does not teach analyzing *cartographic* data. Rather, as discussed above, Bailey teaches analyzing sonar returns. This is an important distinction. They are simply not the same nor analogous to one another, as they convey distinctly different

information. Therefore, Bailey cannot be said to suggest “analyzing **cartographic** data **only** within the user defined graphical filter area for the preselected conditions” (emphasis added), as claimed. Thus, Bailey fails to disclose, suggest or make obvious “analyzing cartographic data only within the user defined graphical filter area for the preselected conditions” as claimed in claim 19. As a result, the Examiner has failed to properly establish a *prima facie* case of anticipation, and therefore the present rejections of claims 19, 20, and 22 cannot be sustained.

Obviousness

Obviousness can be a problematic basis for rejection because the Examiner, in deciding that a feature is obvious, has the benefit of the applicant's disclosure as a blueprint and guide. In contrast, one with ordinary skill in the art would have no such guide, in which light even an exceedingly complex solution may seem easy or obvious. Furthermore, once an obviousness rejection has been made, the applicant is in the exceedingly difficult position of having to prove a negative proposition (i.e., non-obviousness) in order to overcome the rejection.

For these reasons, the law places upon the Examiner the initial burden of establishing a *prima facie* case of obviousness. If the Examiner fails to establish the requisite *prima facie* case, the rejection is improper and will be overturned. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993). Only if the Examiner's burden is met does the burden shift to the Applicant to provide evidence to refute the rejection.

In meeting this initial burden, the Examiner “cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Thus, the Examiner is required to perform the “critical step” of casting his or her mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See, e.g., W. L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

Rejections on obviousness grounds also cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988, 78 U.S.P.Q.2d 1329 (Fed. Cir. 2006). The factual inquiry performed by the Examiner in issuing an obviousness rejection must be thorough and searching. *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001 (Fed. Cir. 2001). The prohibition against conclusory examination is as much rooted in the Administrative Procedure Act, which ensures due process and non-arbitrary decision-making, as it is in § 103. *In re Kahn*, 441 F.3d at 988.

Three criteria must be satisfied by the Examiner in order to establish a *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the combination of references must teach or suggest all

the claim limitations. See MPEP § 706.02(j), citing *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). This "motivation-suggestion-teaching" requirement protects against the entry of hindsight into the obviousness analysis, a problem which § 103 was meant to confront. *In re Kahn*, 441 F.3d at 988.

Consequently, an Examiner's mere identification in the prior art of each individual element claimed is insufficient to defeat the patentability of a claimed invention without a proper suggestion to combine or modify the elements. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998). The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125 (Fed. Cir. 1984).

In presenting the suggestion or motivation to combine prior art references, the Examiner may not resort to broad and conclusory statements; as such statements are not "evidence" of anything. *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000). The suggestion to make the claimed combination must be found in the prior art, not in the applicant's disclosure. *In re Vaeck*, 947 F.2d at 490. If the Examiner's proposed combination renders the prior art invention unsatisfactory for its intended purpose, or changes its principal of operation, there can be no suggestion or motivation to form the combination—and thus no *prima facie* case of obviousness. See MPEP § 2143.01; *In re Gordon*, 733 F.2d at 902.

- b. Claims 1, 5-10, 23, 27-32, 34, 38-40, 42-44, 58-61, 66, and 67 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0006423 (Fujimoto '423) in view of Michaelson et al., U.S. Patent No. 6,734,808.**

I. Summary of Arguments

Rather than identifying a non-user selected waypoint to avoid a condition, Michaelson teaches only suggesting a heading and/or depth change. Thus, the cited references cannot be said to teach, or even suggest, rerouting a "course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed. Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423 and Michaelson.

II. Summary of the References

Fujimoto '423 teaches a maneuvering "system for automatically track-keeping a movable object so as to move along a planned route". ¶ 0002. In other words, when a user selects a waypoint, the system draws a straight line to the waypoint and Fujimoto's system attempts to not only reach the waypoint, but to also keep the vessel on the line with as little deviation as possible.

Michaelson teaches a navigational system for providing a "warning of an impending grounding". Abstract. However, Michaelson only suggests a heading and/or depth change

to avoid an obstacle. Michaelson is devoid of any suggestion of identifying non-user selected waypoints.

III. The Examiner failed to establish a *prima facie* case of obviousness as the cited references do not teach each claim limitation nor does the Examiner provide the requisite suggestion or motivation for combining references.

Claim 1 recites “performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints”. Similarly, claim 23 recites “performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints”. Claim 34 recites “wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints”. Claim 44 recites “performing a marine route calculation algorithm to analyze a course between a first

location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints". Claim 66 recites "wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints".

In contrast, the Examiner acknowledges that "Fujimoto ... does not disclose non-user waypoints". Page 4 of the August 8, 2006 Final Office Action. To cure this defect, the Examiner mistakenly asserts that "Michaelson, on the other hand discloses re-routing the course by identifying one or more non-user waypoints". Page 4 of the August 8, 2006 Final Office Action. In supporting this assertion, the Examiner points to column 24 lines 41-50 and 55-64. The Examiner also points to column 13, line 56, through column 14, line 4.

However, column 24 clearly states that Michaelson's invention merely "alerts the crew to a new heading to steer or engine setting to avoid collisions". Column 24, lines 38-41. Specifically, column 24, lines 57-58, state an "alternate track PT" is first generated by incrementing the ship's heading by [a] nominal step size". Columns 13 and 14, on the other hand, merely disclose providing warnings such as "go shallow" to avoid grounding a submarine. Thus, Michaelson only suggests a heading and/or depth change to avoid an obstacle. In fact, Michaelson is devoid of any suggestion of "**identifying one or more non-user selected waypoints**" (emphasis added), as claimed.

As a result, no combination of Fujimoto '423 and/or Michaelson discloses, suggests or makes obvious "performing a marine route calculation algorithm to route a course

between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 1. No combination of Fujimoto '423 and/or Michaelson discloses, suggests or makes obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 23. No combination of Fujimoto '423 and/or Michaelson discloses, suggests or makes obvious "wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 34. No combination of Fujimoto '423 and/or Michaelson discloses, suggests or makes obvious "performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints", as claimed in claim 44. No combination of Fujimoto '423 and/or Michaelson discloses, suggests or makes obvious "wherein the step of performing a marine route calculation algorithm includes identifying

one or more non-user selected waypoints", as claimed in claim 66.

Claims 58-61 and 67 each recite "displaying the course from the first location to the potential waypoint via the non-user selected waypoints".

As discussed above, neither Fujimoto '423 and/or Michaelson discloses or suggests *identifying* one or more *non-user selected waypoints*. Furthermore, neither Fujimoto '423 and/or Michaelson discloses or suggests "displaying the course from the first location to the potential waypoint via the non-user selected waypoints", as claimed in claims 58-61 and 67, much less in combination with the other limitations of these claims.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423 and Michaelson. Rather, with respect to claims 1 and 44, the Examiner asserts "[i]t would have been obvious to disclose non-user waypoints so that an operator of a ship relies on automatic navigation between a point of origin and a destination without constantly monitoring the ship's travel route". Page 4 of the August 8, 2006 Final Office Action.

However, the test is not what might "have been *obvious to disclose*" (emphasis added). Rather, there must be some suggestion, found in the prior art rather than the applicant's disclosure, to combine one prior art reference with another. Here, as discussed above, the references don't even teach what the Examiner asserts, much less provide any suggestion or motivation to combine their teachings.

In the present case, Fujimoto identifies a problem and solves it. Similarly, Michaelson identifies a problem and solves it. The Examiner's stated motivation might

provide Fujimoto's motivation or might provide Michaelson's motivation, but would not motivate one with ordinary skill in the art to combine their teachings. Specifically, the Examiner's assertion does not provide any motivation to actually identify "one or more non-user selected waypoints", as claimed, certainly not over Michaelson's warnings and suggestion of a heading change. Indeed, once the crew has been alerted and even given a new heading the steer, as taught by Michaelson, the motivation would be satisfied, and therefore no longer exist. Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

- c. Claims 45, 46, and 62 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Michaelson in view of Walsh et al., U.S. Patent No. 3,886,487.**

I. Summary of Arguments

As discussed above, rather than identifying a non-user selected waypoint to avoid a condition, Michaelson teaches only suggesting a heading and/or depth change. Neither Fujimoto '423 nor Walsh even go this far. Thus, the cited references cannot be said to teach, or even suggest, rerouting a "course to avoid the preselected conditions by

identifying one or more non-user selected waypoints", as claimed. Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423, Michaelson, and/or Walsh.

II. Summary of the References

Both Fujimoto '423 and Michaelson have been summarized above.

Walsh, like Bailey, teaches a sonar system. Walsh's improvement over the prior art is that his sonar is forwardly directed, and therefore is useful in navigating shallow waters.

Abstract.

III. The Examiner failed to establish a *prima facie* case of obviousness as the cited references do not teach each claim limitation nor does the Examiner provide the requisite suggestion or motivation for combining references.

Claim 45 recites "performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints".

The Examiner rejected claim 45 "for the same reasons as stated in the rejection of claim 1 as stated above". Page 9 of the August 8, 2006 Final Office Action. Specifically, the Examiner acknowledges that "Fujimoto ... does not disclose non-user waypoints". Page 4 of the August 8, 2006 Final Office Action. To cure this defect, the Examiner

mistakenly asserts that “Michaelson, on the other hand discloses re-routing the course by identifying one or more non-user waypoints”. Page 4 of the August 8, 2006 Final Office Action. However, as discussed above, Michaelson only suggests a heading and/or depth change to avoid an obstacle and is devoid of any suggestion of “**identifying one or more non-user selected waypoints**” (emphasis added), as claimed.

The Examiner goes on to mistakenly assert that “Walsh discloses receiving indication of a minimum water depth from a user and avoiding water depth less than the minimum water depth”. Page 10 of the August 8, 2006 Final Office Action.

However, Walsh merely warns the operator to change course. Specifically, Walsh doesn’t even suggest an alternate heading/depth, much less any non-user defined waypoints. For example, as stated in column 9, lines 6-10, Walsh merely discloses transmitting “a signal to the alarm 188 which in turn then warns the operator of the ship 20 to change course or take other evasive action”, when the depth ahead is too shallow. In other words, Walsh simply provides a warning of an impending collision/grounding. Therefore, Walsh fails to even provide a suggested heading and/or depth change, much less non-user selected waypoints that may be used to avoid the hazard. Thus, at least in this regard, Walsh teaches even less than Michaelson.

Thus, neither Michaelson nor Walsh supply the element that the Examiner acknowledges is absent from Fujimoto ‘423. As a result, no combination of Fujimoto ‘423, Michaelson, and/or Walsh discloses, suggests or makes obvious “performing a marine route calculation algorithm to route a course between a first location and the potential

waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected waypoints”, as claimed in claim 45.

Claim 62 recites “displaying the course from the first location to the potential waypoint via the non-user selected waypoints”.

It should be noted that Walsh is not specifically applied to claim 62. Rather, the Examiner’s rejection of claim 62 consists entirely of “the claim is interpreted and rejected for the same reasons as stated in the rejections of claims 1 and 58 as stated above.” Page 10 of the August 8, 2006 Final Office Action.

In contrast, as discussed above, neither Fujimoto ‘423 and/or Michaelson discloses or suggests **identifying** one or more **non-user selected waypoints**. Furthermore, no combination of Fujimoto ‘423 and/or Michaelson discloses, suggests or makes obvious “displaying the course from the first location to the potential waypoint via the non-user selected waypoints”, as claimed in claim 62.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto ‘423, Michaelson, and Walsh. The Examiner asserts “[i]t would have been obvious to avoid a water depth less than the minimum water depth so that a ship’s operator acknowledges a dangerous water depth and verifies that the ship is maneuvered around or away from an insufficient water depth to ensure the safety of the ships’ passengers”. Page 10 of the August 8, 2006 Final Office Action. However, this assertion does not provide any motivation to actually identify “one or more non-user selected waypoints”, as claimed, certainly not over Michaelson’s warnings and suggestion of a

heading change. Specifically, once the crew has been alerted and even given a new heading, there would be no need for Walsh's warning. Therefore, the stated motivation doesn't actually provide any motivation to combine Walsh with the system of Michaelson, much less any motivation that might render the present claims obvious.

Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

- d. Claims 47-57 and 63-65 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al., U.S. Patent Application No. 2004/0003958 (Fujimoto '958), in view of Fujimoto '423 and Michaelson.**

I. Summary of Arguments

None of the cited prior art references teach, or suggest, "highlighting where the water depth is expected to be less than the minimum water depth" on "a substantially straight line between a first location and the potential waypoint". Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '958, Fujimoto '423, and/or Michaelson.

II. Summary of the References

Like Bailey, Fujimoto '958 teaches a sonar apparatus. Fujimoto '958's improvements appear to be a split screen display and a shallow water alarm. See Abstract. However, like Bailey, Fujimoto '958 does not teach cartographic data. In fact, Fujimoto '958 does not even include any version of the word "cartography" or the term "map". Furthermore, Fujimoto '958 does not include the term "waypoint", as Fujimoto is simply unrelated to navigation.

Both Fujimoto '423 and Michaelson have been summarized above.

III. The Examiner failed to establish a *prima facie* case of obviousness as the cited references do not teach each claim limitation nor does the Examiner provide the requisite suggestion or motivation for combining references.

Claim 47 recites "displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth". Similarly, claim 48 recites "displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water

depth". Claim 51 recites "wherein the line is displayed on the marine cartographic data in a plan view". Claim 54 recites "displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint, wherein the line highlights where the water depth is expected to be less than a minimum water depth".

In contrast, the only straight line the Examiner points to, Fujimoto '958's item 45, is depicted completely independently of actual water depth. In fact, Fujimoto '958's item 45 "designates an alarm water depth line". ¶ 73. This line is arbitrarily set by the user as a minimum water depth, above which Fujimoto '958's apparatus provides an alarm. Therefore, as taught by Fujimoto '958, this line, item 45, as well as all other lines taught by Fujimoto '958, is necessarily displayed on a sonar display, rather than "between a first location and the potential waypoint", much less "on the marine *cartographic* data" (emphasis added), or "wherein the line is displayed on the marine cartographic data in a plan view", as claimed.

Fujimoto '958's only line that relates to an actual water depth is item 43, which depicts a seabed and therefore simply cannot be substantially straight. Of course, displaying item 43 as substantially straight would render it unsatisfactory for its intended purpose, namely depicting the seabed. Furthermore, like item 45, item 43 is necessarily displayed on a sonar display, rather than "between a first location and the potential waypoint", much less "on the marine *cartographic* data" (emphasis added), or "wherein the line is displayed on the marine cartographic data in a plan view", as claimed.

Finally, neither of these lines, themselves, actually highlight or distinguish where the

water depth is above or below a minimum. In fact, the Examiner acknowledges that “Fujimoto does not disclose highlighting the water depth line”. Page 11 of the August 8, 2006 Final Office Action. In order to cure this defect, the Examiner asserts “Michaelson discloses highlighting a terrain threat indication”. Pages 11 and 12 of the August 8, 2006 Final Office Action. However, the Examiner fails to cite to any portion of Michaelson that teaches this. In fact, Michaelson does not include any variation on the word “highlight”. Michaelson simply does not teach highlighting or distinguishing any portion of any **line** “between a first location and the potential waypoint”, much less any line “on the marine **cartographic** data” (emphasis added), or “wherein the line is displayed on the marine cartographic data in a plan view”, as claimed.

As a result, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious “displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth”, as claimed in claim 47, “displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth”, as claimed in claim 48, “wherein the line is displayed on the marine cartographic data in a plan view”, as claimed in claim 51, or “displaying a

substantially straight line on the marine cartographic data between a first location and the potential waypoint, wherein the line highlights where the water depth is expected to be less than a minimum water depth", as claimed in claim 54.

Claim 50 recites "wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth".

The Examiner mistakenly asserts that Fujimoto '958 teaches these limitations. However, as discussed above, Fujimoto '958 merely displays a seabed line 125 above or below a depth mark 124, as the case may be, but the seabed line 125 is otherwise displayed in the exact same manner both above and below the depth mark 124. In fact, the Examiner acknowledges that "Fujimoto does not disclose highlighting the water depth line". Page 11 of the August 8, 2006 Final Office Action. The Examiner also acknowledges that "Fujimoto ... does not disclose first and second manners of displaying a line". Page 12 of the August 8, 2006 Final Office Action. Simply put, there is no difference in the line itself or the manner in which it is displayed, such as highlighting color, solid vs. broken or dashed, whether that portion of the line is flashing, or whether that portion of the line is bolded. In fact, Fujimoto '958 lacks any suggestion to show any portion of the seabed line 123 in a different manner. As a result, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious "wherein the line is depicted in a first manner where the water depth is expected to be greater than the

minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth”, as claimed in claim 50.

Claim 52 recites “wherein the first manner is different from the second manner, such that the line itself is displayed differently in the first manner compared with the second manner”. Claim 53 recites “wherein the first manner comprises displaying the line in a first color and the second manner comprises displaying the line in a second color different from the first color”. Claim 57 recites “wherein the line is displayed in a different manner where the water depth is expected to be less than a minimum water depth”. Claim 65 recites “wherein the line is displayed in a first manner where the water depth is expected to be greater than the preset minimum water depth and a second manner, different from the first manner, where the water depth is expected to be less than the minimum water depth”.

For example, this capability is shown in figures 2A, 4A, and 4C and described on pages 11-14, among other places. Of course, claim 48, from which claims 52 and 53 depend, recites “displaying a substantially straight line between a first location and the potential waypoint”. Similarly, claim 54, from which claim 57 depends, recites “displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint”. Finally, claim 47, from which claim 65 depends, recites “displaying a substantially straight line between a first location and the potential waypoint”. Thus, the line is substantially straight and depicts a path between two points. Furthermore, in the case of claim 57, the line is displayed on “marine cartographic data”.

In contrast, the Examiner acknowledges that “Fujimoto ... does not disclose first and

second manners of displaying a line". Page 12 of the August 8, 2006 Final Office Action. In order to cure this defect, the Examiner asserts "Michaelson discloses first and second colors to display terrain indications". Page 12 of the August 8, 2006 Final Office Action. In supporting this assertion, the Examiner points to column 27, lines 40-65. However, Michaelson's terrain indications are simply not analogous to the presently claimed line. Specifically, Michaelson merely teaches varying the color of the displayed terrain data itself, rather than any path through the terrain. See column 27, lines 48-65. As a result, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious "wherein the first manner is different from the second manner, such that the line itself is displayed differently in the first manner compared with the second manner", as claimed in claim 52, "wherein the first manner comprises displaying the line in a first color and the second manner comprises displaying the line in a second color different from the first color", as claimed in claim 53, "wherein the line is displayed in a different manner where the water depth is expected to be less than a minimum water depth", as claimed in claim 57, or "wherein the line is displayed in a first manner where the water depth is expected to be greater than the preset minimum water depth and a second manner, different from the first manner, where the water depth is expected to be less than the minimum water depth", as claimed in claim 65.

Claim 55 recites "performing a marine route calculation algorithm to route a course from the first location to the potential waypoint avoiding areas where the water depth is expected to be less than the minimum water depth by identifying one or more non-user

selected waypoints". Claim 63 recites "wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints". Similarly, claims 56 and 64 each recite "displaying the course from the first location to the potential waypoint via the non-user selected waypoints".

In contrast, as discussed above, no combination of either Fujimoto reference and/or Michaelson discloses, suggests or makes obvious "**identifying** one or more **non-user selected waypoints**" (emphasis added), as claimed in claims 55 and 63, or "displaying the course from the first location to the potential waypoint via the non-user selected waypoints", as claimed in claims 56 and 64, much less doing so in combination with the other limitations of these claims.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '958, Fujimoto '423, and/or Michaelson. Rather, the Examiner asserts that "[i]t would have been obvious to emphasize a **water depth line** by highlighting" (emphasis added). Page 12 of the August 8, 2006 Final Office Action. Such broad and conclusory statements are not "evidence" of anything. See *In re Kotzab*, 217 F.3d at 1370. Furthermore, whether highlighting a **water depth line** would be obvious or not is immaterial to the question of whether it would be obvious to highlight a line between two locations, such as a route segment, according to water depth. Such teachings are found only in Applicant's own disclosure. In order to establish a *prima facie* case of obviousness, there must be some suggestion, found in the prior art rather than the applicant's disclosure, to combine one prior art reference with another. Here, as discussed above, the references

do not even teach what the Examiner asserts, much less provide any suggestion or motivation to combine their teachings. Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

- e. Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey in view of Fujimoto '423.**

I. Summary of Arguments

Neither Bailey nor Fujimoto '423 teach, or even suggest, the claimed limitations. Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Bailey and Fujimoto '423.

II. Summary of the References

Both Bailey and Fujimoto '423 have been summarized above.

III. The Examiner failed to establish a *prima facie* case of obviousness as the cited references do not teach each claim limitation nor does the

Examiner provide the requisite suggestion or motivation for combining references.

Claim 21 depends from claim 19. As discussed above, Bailey fails to teach the limitations of claim 19. Fujimoto '423 likewise fails to teach the limitations of claim 19 missing from Bailey. Thus, no combination of Bailey and Fujimoto '423 teaches each and every limitation of claim 19, much less with the added limitation of claim 21.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Bailey and Fujimoto '423. Rather, the Examiner asserts "[i]t would have been obvious to acquire cartographic data from a GPS so that a ship's captain relies on accurate real-time data". Page 8 of the August 8, 2006 Final Office Action.

However, Bailey already acquires real-time sonar data and, as discussed above, does not even mention cartographic data. Therefore, Bailey's captain already relies on accurate real-time data. Furthermore, at least for Bailey's purposes, namely display of sonar data, Bailey's system has no need of GPS or cartographic data. Therefore, the Examiner's stated motivation would not in fact motivation one to combine Bailey and Fujimoto '423. Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

- f. **Claim 33 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Michaelson, in view of Tobin Jr., U.S. Patent No. 4,323,992.**

I. Summary of Arguments

Neither Fujimoto '423, Michaelson, nor Tobin teach, or even suggest, the claimed limitations. Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423, Michaelson, and Tobin.

II. Summary of the References

Both Fujimoto '423 and Michaelson have been summarized above. Tobin teaches a sonar repeater. *See* Abstract.

III. The Examiner failed to establish a *prima facie* case of obviousness as the cited references do not teach each claim limitation nor does the Examiner provide the requisite suggestion or motivation for combining references.

Claim 33 depends from claim 23. As discussed above, Fujimoto '423 and Michaelson fail to teach the limitations of claim 23. Tobin likewise fails to teach the limitations of claim 23 missing from Fujimoto '423 and Michaelson. In fact, the Examiner never even asserts how Tobin is applicable to claims 23 and/or 33. Thus, no combination

of Fujimoto '423, Michaelson, and Tobin teaches each and every limitation of claim 23, much less with the added limitation of claim 33.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423, Michaelson, and Tobin. Rather, the Examiner asserts "[i]t would have been obvious to include the preselected condition of water depth so that a ship's operator acknowledges a dangerous water depth". Page 8 of the August 8, 2006 Final Office Action.

However, as discussed above, Michaelson already warns of and suggests a heading and/or depth change to avoid an obstacle. Therefore, Michaelson would not need Tobin's teachings to satisfy the Examiner's stated motivation. Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

- g. Claim 41 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto '423 and Michaelson in view of Bailey.

I. Summary of Arguments

Neither Fujimoto '423, Michaelson, nor Bailey teach, or even suggest, the claimed limitations. Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423, Michaelson, and Bailey.

II. Summary of the References

Fujimoto '423, Michaelson, and Bailey have been summarized above.

III. The Examiner failed to establish a *prima facie* case of obviousness as the cited references do not teach each claim limitation nor does the Examiner provide the requisite suggestion or motivation for combining references.

Claim 41 depends from claim 34. As discussed above, Fujimoto '423 and Michaelson fail to teach the limitations of claim 34. Bailey likewise fails to teach the limitations of claim 34 missing from Fujimoto '423 and Michaelson. Thus, no combination of Fujimoto '423, Michaelson, and Bailey teaches each and every limitation of claim 34, much less with the added limitation of claim 41.

Furthermore, the Examiner fails to provide the requisite suggestion or motivation to combine Fujimoto '423, Michaelson, and Bailey. Rather, the Examiner asserts "[i]t would have been obvious to display cartographic data as a user defined graphical filter area to so that a user has a certain degree of control over the display". Page 9 of the August 8, 2006 Final Office Action.

However, in the present case, Fujimoto '423, Michaelson, and Bailey each identifies a different problem and solves it. Thus, the Examiner's stated motivation might provide Fujimoto '423's motivation, might provide Michaelson's motivation, or might provide Bailey's motivation, but would not motivate one with ordinary skill in the art to combine their teachings. Furthermore, as discussed above, Bailey does not even mention cartographic data. Finally, as discussed above, Bailey teaches automatically redefining his display area, thereby taking such control out of the user's hands contrary to the Examiner's asserted motivation. Thus, not only does the Examiner fail to cite references that teach each and every claim limitation, the Examiner also fails to provide the requisite suggestion or motivation to combine references. As a result, the Examiner has failed to establish a *prima facie* case of obviousness, and therefore the present rejections cannot be sustained.

VIII. Conclusion

The Examiner failed, with regard to the rejection of the pending claims under 35 U.S.C. §102(e), to establish the requisite *prima facie* case of anticipation because the cited references do not teach each and every claim limitation. Similarly, the Examiner failed, with regard to the rejection of the pending claims under 35 U.S.C. §103(a), to establish the requisite *prima facie* case of obviousness because the cited references do not teach each and every claim limitation and the Examiner has not provided the requisite suggestion or motivation to combine the cited references. In fact, the Examiner acknowledges that Fujimoto fails to expressly set forth each element of the currently pending claims.

However, the Examiner's assertions that Michealson, Welsh, Tobin, and/or Bailey set forth the missing elements are simply erroneous, as described above. Thus, the Examiner failed to establish the requisite *prima facie* case of anticipation and obviousness, and therefore the rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103 cannot be sustained and must be overturned.

Accordingly, reversal of the Examiner's rejections is proper, and such favorable action is solicited.

Respectfully submitted,

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VIII. Claims Appendix

1. (Previously Presented) A method for marine navigation, comprising:
receiving one or more preselected conditions from a user;
identifying a potential waypoint; and
performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.
5. (Previously Presented) The method of claim 1, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.
6. (Original) The method of claim 5, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

7. (Previously Presented) The method of claim 1, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.
8. (Original) The method of claim 7, wherein providing the alert signal includes emitting an audio alert.
9. (Original) The method of claim 7, wherein providing the alert signal includes displaying a visual alert.
10. (Previously Presented) The method of claim 1, the preselected conditions including a weather condition.
19. (Previously Presented) A method for marine navigation, comprising:
receiving one or more preselected conditions from a user;
receiving a user defined graphical filter area from the user;
identifying the user defined graphical filter area on a display;
analyzing cartographic data only within the user defined graphical filter area for the preselected conditions; and
providing an alert signal when cartographic data within the user defined graphical filter area indicate the preselected conditions.

20. (Original) The method of claim 19, wherein identifying the user defined graphical filter area includes repositioning the user defined graphical filter area.

21. (Original) The method of claim 19, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

22. (Original) The method of claim 19, further including receiving preselected conditions selected from the group of land, water depth, rock(s), sandbars, shelves, tide condition, tidal data, wind conditions, weather conditions, ice, above-water obstacles, underwater obstacles, type of water bottom, and prohibited areas.

23. (Previously Presented) A computer readable medium having a set of computer readable instructions, the set of computer readable instructions comprising instructions for:

- receiving one or more preselected conditions from a user;
- identifying a potential waypoint upon a first event; and
- performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint avoiding the preselected conditions, including analyzing cartographic data between the first location and the potential waypoint and re-routing the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

27. (Original) The computer readable medium of claim 23, further including determining the first location on the course based on a signal from a global positioning system (GPS); and analyzing cartographic data for a predetermined area around the first location for preselected conditions.

28. (Original) The computer readable medium of claim 27, further including providing an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

29. (Original) The computer readable medium of claim 23, wherein analyzing cartographic data further comprises acquiring cartographic data from a global positioning system (GPS).

30. (Original) The computer readable medium of claim 23, further including providing an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

31. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes emitting a signal for an audio alert.

32. (Original) The computer readable medium of claim 30, wherein providing the alert signal includes displaying a visual alert.

33. (Previously Presented) The computer readable medium of claim 23, the preselected conditions including a water depth.

34. (Previously Presented) An electronic marine navigation device, comprising:
a processor;
a user interface operatively coupled to the processor, wherein the user interface receives one or more preselected conditions from a user;
a location input operatively coupled to the processor, wherein the location input receives a first location and a potential waypoint separate from the first location; and
a memory operatively coupled to the processor and the location input, the memory having cartographic data including data related to the preselected conditions, wherein the processor operates on a marine route calculation algorithm to analyze a course between the first location and the potential waypoint in view of the preselected conditions of the cartographic data and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

38. (Previously Presented) The electronic marine navigation device of claim 34, further including a receiver for a global positioning system (GPS) operatively coupled to the processor, wherein the processor determines the first location on the course based on a signal received from the GPS, and analyzes cartographic data for a predetermined area around the first location for preselected conditions.

39. (Original) The electronic marine navigation device of claim 38, wherein the processor provides an alert signal when the analyzed cartographic data for the predetermined area around the first location includes preselected conditions.

40. (Previously Presented) The electronic marine navigation device of claim 34, wherein the processor provides an alert signal when the analyzed cartographic data between the first location and the potential waypoint includes preselected conditions.

41. (Original) The electronic marine navigation device of claim 34, wherein the location input receives a user defined graphical filter area, and wherein the processor operates on the marine route calculation algorithm to analyze cartographic data within the defined graphical filter area for preselected conditions and wherein the processor provides an alert signal when the analyzed cartographic data for the user defined graphical filter area includes preselected conditions.

42. (Previously Presented) The method of claim 1, wherein both the first location and the potential waypoint are independent of a current location of a device implementing the method.

43. (Previously Presented) The method of claim 1, wherein at least a portion of the course is unrelated to a current heading of a device implementing the method.

44. (Previously Presented) A method for marine navigation, comprising:
identifying a potential waypoint; and
performing a marine route calculation algorithm to analyze a course between a first location and the potential waypoint in order to avoid preselected conditions received from a user and re-route the course to avoid the preselected conditions by identifying one or more non-user selected waypoints.

45. (Previously Presented) A method for marine navigation, comprising:
receiving indication of a minimum water depth from a user;
identifying a potential waypoint; and
performing a marine route calculation algorithm to route a course between a first location and the potential waypoint avoiding water depth less than the minimum water depth by identifying one or more non-user selected

waypoints.

46. (Previously Presented) The method of claim 45, displaying a visual indication of places along the calculated course where the water depth is expected to approach the minimum water depth.

47. (Previously Presented) A method for marine navigation, comprising:
receiving indication of a minimum water depth from a user;
displaying marine cartographic data;
receiving indication of a potential waypoint;
displaying a substantially straight line between a first location and the potential waypoint, wherein the line depicts both where the water depth is expected to be greater than the minimum water depth and where the water depth is expected to be less than the minimum water depth, and wherein the line highlights where the water depth is expected to be less than the minimum water depth; and
performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.

48. (Previously Presented) A method for marine navigation, comprising:
- displaying marine cartographic data;
 - receiving indication of a potential waypoint;
 - displaying a substantially straight line between a first location and the potential waypoint, wherein the line distinguishes where the water depth is expected to be greater than a preset minimum water depth from where the water depth is expected to be less than the minimum water depth; and
 - performing a marine route calculation algorithm to route a course between the first location and the potential waypoint avoiding water depth less than the minimum water depth.
49. (Previously Presented) The method of claim 48, wherein the minimum water depth is user selectable.
50. (Previously Presented) The method of claim 48, wherein the line is depicted in a first manner where the water depth is expected to be greater than the minimum water depth and the line is depicted in a second manner where the water depth is expected to be less than the minimum water depth.
51. (Previously Presented) The method of claim 48, wherein the line is displayed on the

marine cartographic data in a plan view.

52. (Previously Presented) The method of claim 50, wherein the first manner is different from the second manner, such that the line itself is displayed differently in the first manner compared with the second manner.

53. (Previously Presented) The method of claim 50, wherein the first manner comprises displaying the line in a first color and the second manner comprises displaying the line in a second color different from the first color.

54. (Previously Presented) A method for marine navigation, comprising:
displaying marine cartographic data;
receiving indication of a potential waypoint; and
displaying a substantially straight line on the marine cartographic data between a first location and the potential waypoint, wherein the line highlights where the water depth is expected to be less than a minimum water depth.

55. (Previously Presented) The method of claim 54, further including the step of performing a marine route calculation algorithm to route a course from the first location to the potential waypoint avoiding areas where the water depth is expected to be less than the minimum water depth by identifying one or more non-user selected waypoints.

56. (Previously Presented) The method of claim 55, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

57. (Previously Presented) The method of claim 54, wherein the line is displayed in a different manner where the water depth is expected to be less than a minimum water depth.

58. (Previously Presented) The method of claim 1, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

59. (Previously Presented) The computer readable medium of claim 23, further including instructions for displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

60. (Previously Presented) The electronic marine navigation device of claim 34, further including a display for displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

61. (Previously Presented) The method of claim 44, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

62. (Previously Presented) The method of claim 45, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

63. (Previously Presented) The method of claim 47, wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints.

64. (Previously Presented) The method of claim 63, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

65. (Previously Presented) The method of claim 47, wherein the line is displayed in a first manner where the water depth is expected to be greater than the preset minimum water depth and a second manner, different from the first manner, where the water depth is expected to be less than the minimum water depth.

66. (Previously Presented) The method of claim 48, wherein the step of performing a marine route calculation algorithm includes identifying one or more non-user selected waypoints.

67. (Previously Presented) The method of claim 66, further including the step of displaying the course from the first location to the potential waypoint via the non-user selected waypoints.

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IX. Evidence Appendix

None.

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X. Related Proceedings Appendix

None.